Chapter 8: Implementation of the Long-Term Plan for Achieving Water Quality Goals in the Everglades Protection Area

Tracey T. Piccone

SUMMARY

Pursuant to the requirements of Section 373.4592(13), Florida Statutes (F.S.), this chapter presents an update on the progress of the implementation of the Long-Term Plan for Achieving Water Quality Goals in the Everglades Protection Area (Long-Term Plan) (Burns and McDonnell, 2003) and subsequent amendments. Because there is overlap between many of the Long-Term Plan projects and other South Florida Water Management District (SFWMD or District) Everglades restoration efforts, the updates for many of the Long-Term Plan projects will appear in other chapters of the *2007 South Florida Environmental Report – Volume I.*

The Long-Term Plan projects that cover the Everglades Stormwater Program basins and source controls will be covered in Chapter 4, and the Long-Term Plan projects relating to the Everglades Construction Project Stormwater Treatment Areas will be covered in Chapter 5 of this volume. For additional reference, **Table 8-1** indicates the chapter where each Long-Term Plan project update appears. The financial reporting related to the implementation of the Long-Term Plan will be covered in Chapter 13 of this volume.

The long-term Everglades water quality goal is for all discharges to the Everglades Protection Area (EPA) to achieve and maintain water quality standards in the EPA, including compliance with the total phosphorus (TP) criterion established in Rule 62-302.540, Florida Administrative Code (F.A.C.). Substantial progress towards reducing phosphorus levels discharged into the EPA has been made by the State of Florida and other stakeholders.

As of April 30, 2006, the Everglades Agricultural Area's Best Management Practices and the Stormwater Treatment Areas combined have removed more than 2,485 metric tons[1] of TP that otherwise would have entered the Everglades, however additional measures are necessary to achieve the Everglades water quality goal. The Long-Term Plan sets forth measures to achieve that goal and permits the State of Florida and the District to fulfill their obligations under both the Everglades Forever Act (Section 373.4592, F.S.) and the federal Settlement Agreement (Case No. 88-1886-CIV-MORENO). A summarized list and locations of the basins addressed in the Long-Term Plan are presented in **Table 8-2** and **Figure 8-1**, respectively.

[1] Note that this is a draft, estimated value based on some provisional flow data for Water Year 2006. Upon completing review of the provisional flow data, the value may be revised and updated in the final report. It should also be noted that the inception-to-date numbers presented for the STAs now include start-up flows and loads and therefore will reflect a revision to the STA removal reported in previous SFERs.

The District continued implementation of the Long-Term Plan in Fiscal Year 2006 (FY2006) (October 1, 2005 through September 30, 2006). The District's requests for major revisions to the Long-Term Plan were approved by the Florida Department of Environmental Protection (FDEP) on December 23, 2005, June 15, 2006, and in late August 2006, as summarized in this chapter.

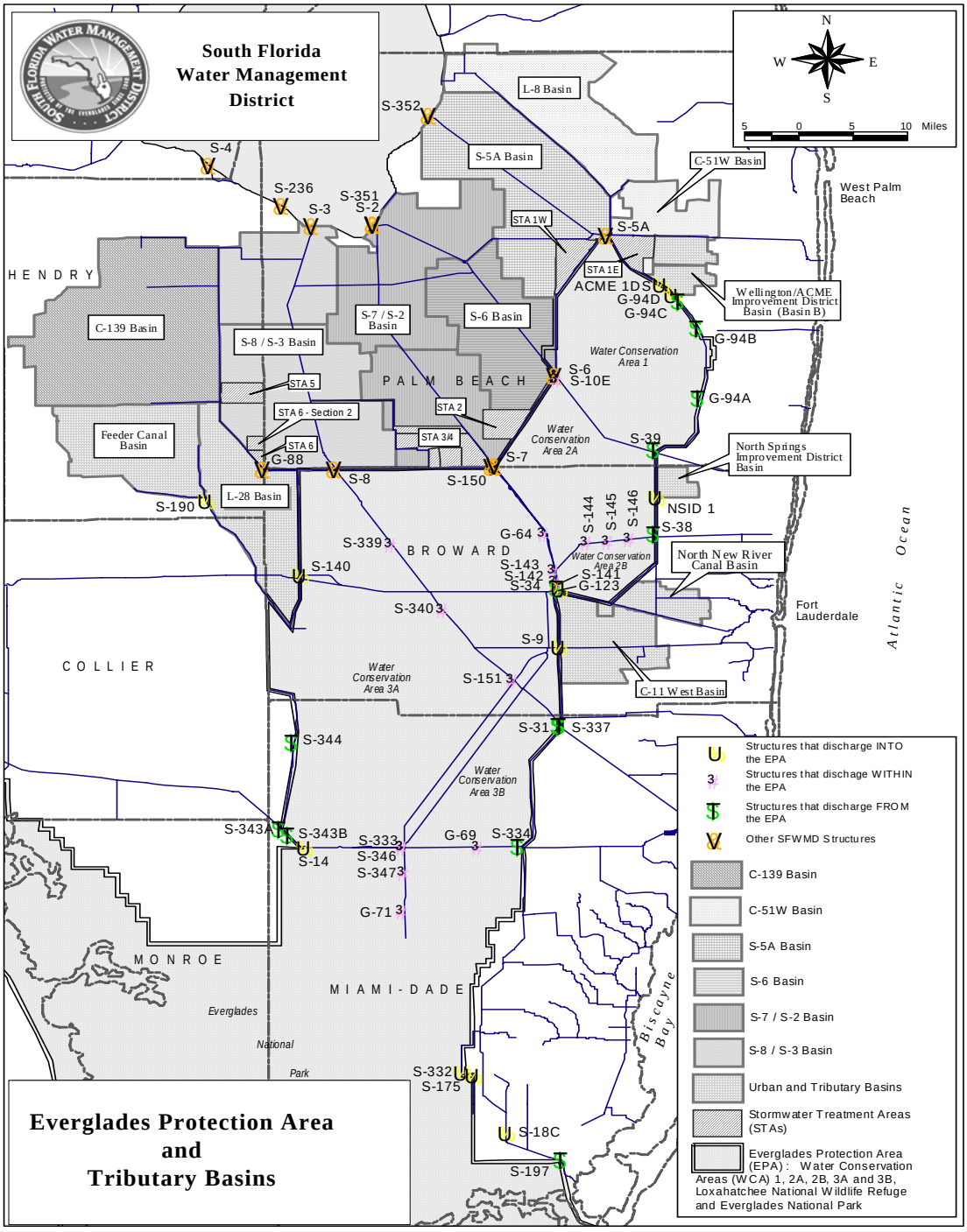

Figure 8-1. Overview of the Everglades Protection Area (EPA) and tributary basins.

Table 8-1. Summary of projects and reference chapters in the Long-Term Plan.

Project Description	Chapter References in the 2007 SFER – Volume I
EVERGLADES CONSTRUCTION PROJECT (ECP) BASINS	
STA-1E Enhancements	5 (STA-1E section)
STA-1W Enhancements	5 (STA-1W section)
STA-2 Enhancements	5 (STA-2 section)
STA-3/4 Enhancements	5 (STA-3/4 section)
STA-5 Enhancements	5 (STA-5 section)
STA-6 Enhancements	5 (STA-6 section)
ECP Operation and Maintenance - STAs and non-STAs	5 (each STA section)
ECP Compliance Monitoring	5 (each STA section)
ECP Operations Monitoring	5 (project-level activities section)
STA Site Management	5 (project-level activities section)
EVERGLADES STORMWATER PROGRAM (ESP) BASINS	
Acme Basin B	4
North Springs Improvement District Basin	4
North New River Canal Basin	4
C-11 West Basin	4
Feeder Canal Basin	4
PROCESS DEVELOPMENT AND ENGINEERING (PDE)	
Basin Source Controls	
EAA Basins - Source Controls	4
C-139 Basin - Source Controls	4
Enhanced Control and Monitoring	
Acquisition of Survey Data	5 (project-level activities section)
Additional Flow and Water Quality Monitoring Stations	5 (project-level activities section)
Review and Correction of Flow Measurement Anomalies	5 (project-level activities section)
Analysis and Interpretation	5 (project-level activities section)
Update and Maintenance of Hydraulic Models	5 (project-level activities section)

Project Description	Chapter References in the 2007 SFER – Volume I
Improved Analytical and Forecasting Tools	
Continued Development and Refinement of DMSTA	8
Water Quality Impacts of Reservoirs	8
PSTA Investigations	5 (project-level activities section)
PSTA Implementation Project in STA-3/4	5 (project-level activities section)
Optimizing SAV Performance	
Operational Strategy	5 (STA-2 section)
Vegetation Maintenance	5 (STA-2 section)
Hydrologic and Hydraulic Assessment	5 (project-level activities section)
Internal Measurements	5 (project-level activities section)
Comparative Analysis	5 (future reports)
Additional Structural and Operational Measures	
Evaluation of Full-Scale STA Enhancements	5 (STA-1W section)
Improved Reliability of Inflow Forecasts	
Update Baseline Data Sets	8
Basins With Limited Current Data	8
Influence of CERP Projects on Inflow Volumes and Loads	8
Lake Okeechobee Long-Term Trends	8
Determine Water Quality Relationships in the EPA	3C
ACCELERATE RECOVERY OF IMPACTED AREAS	
Recovery Model Development and Calibration	6
Downstream Influence of Adding Clean Water to Previously Impacted Areas	6
Options for Accelerating Recovery	6
Alternatives Analysis and Plan Formulation	6
Hydropattern Restoration	6
Implement Steps for Recovery in Impacted Areas	6
ADAPTIVE IMPLEMENTATION	8
PROGRAM MANAGEMENT	8

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Table 8-2. EPA tributary basins included in the Long-Term Plan.

Basin	Canal	Stormwater Treatment Areas (STAs)	Receiving Water Conservation Areas (WCAs)
S-5A (EAA)	West Palm Beach Canal	STA-1W, STA-1E, STA-2	WCA-1
S-6 (EAA)	Hillsboro Canal	STA-2	WCA-2A
S-7 (EAA)	North New River Canal (NNRC)	STA-3/4	WCA-3A
S-8 (EAA)	Miami Canal	STA-3/4, STA-6	WCA-3A
C-51 West and L-8 Basin	C-51 West	STA-1E, STA-1W	WCA-1
C-139 (including Annex)	L-3 canal	STA-5, STA-6	WCA-3A
ACME Basin B	N/A	N/A	WCA-1
North Springs Improvement District (NSID)	N/A	N/A	WCA-2A
North New River Canal (NNRC) (G-123)	NNRC	N/A	WCA-3A
C-11 West	C-11 West	N/A	WCA-3A
Feeder Canal	L-28 interceptor canal	N/A	WCA-3A
L-28	L-28	N/A	WCA-3A

INTRODUCTION

The long-term Everglades water quality goal is for all discharges to the Everglades Protection Area (EPA) to achieve and maintain water quality standards, including compliance with the phosphorus criterion established in Rule 62-302.540, Florida Administrative Code (F.A.C.). Substantial progress towards reducing phosphorus levels discharged into the EPA has been made by the State of Florida and other stakeholders. The combined performance of the source controls in the Everglades Agricultural Area (EAA) and the Stormwater Treatment Areas (STAs) of the Everglades Construction Project (ECP) has exceeded expectations. In addition, some source control measures have been implemented in urban and other tributary basins included in the Everglades Stormwater Program. Nonetheless, additional measures are necessary to achieve the Everglades water quality goal.

The Long-Term Plan for Achieving Water Quality Goals in the Everglades Protection Area (Long-Term Plan) contains activities to achieve that goal and to permit the State of Florida and the District to fulfill their obligations under both the Everglades Forever Act (EFA) [Section 373.4592, Florida Statutes (F.S.)] and the federal Everglades Settlement Agreement (i.e., Settlement Agreement dated July 26, 1991, entered in Case No. 88-1886-CIV-MORENO, U.S. District Court for the Southern District of Florida, as modified by the Omnibus Order entered in the case on April 27, 2001).

OVERVIEW OF THE LONG-TERM PLAN

The Long-Term Plan (dated October 27, 2003) was submitted to the FDEP in December 2003 as part of the long-term permit application required by the EFA. The October 27, 2003 version of the Long-Term Plan is located on the District's web site at http://www.sfwmd.gov/org/erd/bsfboard/waterquality.pdf. Descriptions of all subsequent revisions to the Long-Term Plan including documents, data, presentations, and related links are also available at http://www.sfwmd.gov/org/erd/longtermplan/index.shtml.

STATUS OF PROJECT-LEVEL ACTIVITIES

The District began implementing the Long-Term Plan projects in Fiscal Year 2004 (FY2004) (October 1, 2003 through September 30, 2004) and continued implementation in FY2006. The third annual meeting was held on February 28, 2006 at the District's headquarters in West Palm Beach, Florida. The purpose of this meeting was to update the public on the status of the projects midway through the second year of implementation, and to receive input from the public on proposed modifications to the Long-Term Plan.

Because there is overlap between many of the Long-Term Plan projects and other Everglades restoration efforts by the District, updates for several of the Long-Term Plan projects will appear in other chapters of the *2007 South Florida Environmental Report – Volume I*. **Table 8-1** summarizes all of the Long-Term Plan projects, including cross-references to other chapters in which the specific project update appears. An update on the status of project-level activities for eight of the Long-Term Plan projects for FY2006 is summarized below.

Continued Development and Refinement of the Dynamic Model for Stormwater Treatment Areas

The Dynamic Model for Stormwater Treatment Areas (DMSTA) (Walker and Kadlec, 2002) is the tool used to model the future phosphorus performance of the STAs. The DMSTA was used to evaluate components of the Long-Term Plan and will be applied to future enhancements and the interaction between the Comprehensive Everglades Restoration Plan (CERP) reservoirs and the STAs. To increase the certainty in the accuracy of the model predictions, the model will be updated and calibrated.

The DMSTA refinement tasks identified in the Long-Term Plan for FY2006 were completed by the U.S. Department of the Interior and the U.S. Army Corps of Engineers (USACE) through contracts with Dr. William W. Walker, Jr.

Additional information on the September 2005 version of DMSTA, referred to as Dynamic Model for Stormwater Treatment Areas Model Version 2 or DMSTA2, can be found online at http://www.wwwalker.net/dmsta/index.htm.

Water Quality Impacts of Reservoirs

The Water Quality Impacts of Reservoirs Project was initiated in FY2004, as recommended in Section 5.3.2, Water Quality Impacts of Reservoirs of the Process Development and Engineering (PDE) component of the Long-Term Plan. This project was completed in FY2005. All of the documents completed in support of this project can be found online at http://www.sfwmd.gov/org/erd/longtermplan/documents.shtml. All of the hydrologic, water quality, and climatic data collected for the 36 candidate data sites plus the water and phosphorus balances for the eight potential data sites are available from the District's web site at http://spatial1.sfwmd.gov/wqir/.

Update Baseline Data Sets

As recommended in the Long-Term Plan, the analyses presented in the baseline data for the Basin-Specific Feasibility Studies to Achieve the Long-Term Water Quality Goals for the Everglades (Goforth and Piccone, 2001) should be updated no less frequently than once every two years to continually improve the degree of confidence in the projected TP loads in inflows to the treatment areas, or in some instances, in discharges directly to the EPA.

The Long-Term Plan recommendation was to provide funding for the inflow data set updates beginning in FY2005, and extending through FY2015 in alternating years. The next scheduled update is FY2007. The District has the responsibility for updating the baseline data sets; the updated data sets are reviewed by the FDEP as well as interested stakeholders.

Basins with Limited Current Data

Water quality performance projections for Everglades restoration efforts depend on understanding water movement and nutrient loadings from multiple watersheds. The projections utilize models that are calibrated from flow and water quality data collected at representative sites throughout the region. The next scheduled activity for this project is in FY2007.

Influence of the Comprehensive Everglades Restoration Plan Projects on Inflow Volumes and Loads

As the CERP projects proceed through planning and implementation, the projected impact of these projects on the inflow volumes and loads to the STAs and to receiving water bodies in the EPA must be updated. Of particular interest is the EAA Storage Reservoirs Project, which will be linked operationally to one or more of the STAs upon its completion.

Because the Phase I EAA storage reservoir has been expedited to the design phase, better information now exists regarding the proposed size, location, and operation of the reservoir, which will provide inflows to the STAs. In FY2005 and early FY2006, as part of the EAA Regional Feasibility Study, analyses were conducted to determine ways to optimize the performance of the linked Phase I EAA Storage Reservoir and the STAs.

The documents produced as part of the EAA Regional Feasibility Study can be found at: http://www.sfwmd.gov/org/erd/longtermplan/documents.shtml.

Lake Okeechobee Long-Term Trends

Lake Okeechobee will contribute a significant portion of the water anticipated to be captured and treated in the STAs. Although no work was scheduled to occur on this project in FY2006, District staff and consultants working on Long-Term Plan projects and on Lake Okeechobee projects coordinated with the USACE to develop updated STA performance projections in support of the USACE's evaluation of alternative revised Lake Okeechobee operating schedules. The results of this evaluation will be available later in FY2006 at which time the selected alternative is anticipated to be announced by the USACE. Implementation of the selected alternative is set for January 2007.

Adaptive Implementation

Part 6 of the Long-Term Plan includes a recommendation that a dedicated funding source be established to facilitate the adaptive implementation process and assure that additional steps are expeditiously implemented. The Long-Term Plan includes a recommendation for funding of $36 million, distributed as $9 million per year from FY2007 to FY2010. Although no funds were recommended for this project until FY2007, as in earlier years, opportunities arose in FY2006 to provide funds for several STA optimization activities. These activities, which were combined into one Long-Term Plan revision, request included real time monitoring of phosphorus at STA structures, strategies for vegetation management in STAs, and BMPs in District canals. For additional information on this revision to the Long-Term Plan, see the *Revisions to the Long-Term Plan* section of this chapter.

Program Management

During FY2006, program management activities performed by the District and contractors included maintenance of the project schedules, STA operational support, program reporting activities, and overall Everglades program coordination.

REVISIONS TO THE LONG-TERM PLAN

As stated in the amended EFA (2003), revisions to the Long-Term Plan shall be incorporated through an adaptive management approach, including a PDE component to identify and implement incremental optimization measures for further phosphorus reductions. Also, as stated in the amended EFA, revisions to the Long-Term Plan shall be approved by the FDEP.

During FY2006, the District submitted three revision requests to the FDEP. Copies of all District request letters, FDEP approval letters and supporting documentation can be found at: http://www.sfwmd.gov/org/erd/longtermplan/documents.shtml.

1. On November 22, 2005, the District submitted a request to the FDEP for a proposed major revision to the Long-Term Plan. On December 23, 2005, the FDEP approved the District's proposed major revision to the Long-Term Plan. A brief description of the proposed revision to the plan is presented below:

> As recommended in the Revised Part 2 of the Long-Term Plan (November 2004), structural enhancements to Cells 2, 4 and 5 of this STA were initiated in FY05 during the dry season. Damage and delays due to the hurricanes in the fall of 2004 resulted in revised schedules for completing the enhancements and hurricane repair work. District scientists have evaluated the condition of the vegetation in Cells 2, 4 and 5 and have proposed the following as the best plan of action to ensure the optimal long-term phosphorus removal performance of this STA:
>
> - Post-pone enhancements in Cells 1 & 3 by one year to allow vegetation grow-in in Cells 2, 4 and 5. Completion would occur in FY07 instead of FY06
> - Implement vegetation management activities to expedite Cells 2, 4, and 5 vegetation grow-in
>
> The current proposed revision also includes a revision to the schedule for completing the automation of the STA-1W G-304 structures such that completion would occur in FY06 instead of FY05 as was stated in the November 2004 revision to the Long-Term Plan.
>
> As recommended in the Revised Part 2 of the Long-Term Plan (November 2004), structural and vegetation conversion activities were initiated in Cells 2 and 3 of STA-3/4 during FY04 and FY05. The Long-Term Plan also recommended conversion of Cell 1 B from an emergent (predominantly cattail) marsh to a Submerged Aquatic Vegetation (SAV) marsh in the coming dry season. In order to implement this conversion, the treatment cell would need to be taken offline, dried out, burned and/or treated with herbicide, then re-flooded to allow SAV grow-in. District scientists have evaluated the recent excellent performance of this treatment cell and have proposed a revision to the Long-Term Plan that will involve a less aggressive method of converting the vegetation from cattail to SAV, and will allow the treatment cell to remain online in flow-through treatment mode. This method would consist of herbicide application to small portions of the marsh at one time, followed by transplanting of SAV in the open areas.

2. On March 15, 2006, the District submitted a second request to the FDEP for a proposed major revision to the Long-Term Plan. On June 15, 2006, the FDEP approved the District's proposed major revision to the Long-Term Plan. A description of the proposed revision is presented below:

> As described in Part 3 of the October 27, 2003 Long-Term Plan, one of the key assumptions was that the strategy for ACME Basin B, as well as determination of its implementation schedule, would be accomplished through the CERP planning and implementation process. Subsequent to completion of the Long-Term Plan, it was

determined that the overall timeframe associated with the CERP planning process might impact the ability to complete construction of the ACME Basin B project by the originally planned date of December 31, 2006, and within the original budget. Also subsequent to the completion of the Long-Term Plan, it was confirmed that the optimal plan for addressing ACME Basin B discharges would include discharging to the C-51W Canal for eventual treatment in STA-1 E.

In order to complete the ACME Basin B project within the approximate timeframe of the originally planned completion date, and in order to facilitate better coordination with STA-1 E, the planned destination for this basin's runoff, it is now proposed to incorporate the ACME Basin B project into the Long-Term Plan. This revision will facilitate the completion of the ACME Basin B project by providing a dedicated funding source through the Everglades Trust Fund. Attached is a revised Part 3 of the October 27, 2003 Long-Term Plan further describing the costs and schedules associated with the proposed addition of the ACME Basin B project to the Long-Term Plan.

3. On July 28, 2006, the District submitted a third request to the FDEP for a proposed major revision to the Long-Term Plan. In late August 2006, the FDEP approved the District's proposed major revision to the Long-Term Plan. A brief description of the proposed revision is presented below:

The proposed revision includes the addition of the C-9 and C-11W CERP projects to the Long-Term Plan. The C-9 and C-11W project goals are consistent with Long-Term Plan goals and integrating with the Long-Term Plan is consistent with F.S. 373.4592 (3)(c)(EFA). Adding these projects to Long-Term Plan will provide a dedicated funding source to ensure timely completion. The cost estimate for the C-9 and C-11W Basin CERP projects is $380 million, including real estate, engineering, design, construction, construction management and annual operations and maintenance through FY 2016.

The proposed revision also includes implementation of a plan to address performance issues in STA-1W Cell 5 following the 2004 and 2005 hurricanes. The plan includes extensive dry-out of Cell 5B to consolidate the sediment; planting of rice to assist with sediment stabilization, anchoring of SAV, and attachment area for epiphytic periphyton; planting of vegetated berms in Cell 5B to serve as windbreaks; and some limited topographic re-shaping and re-distribution of material from high areas to low areas. Construction of the proposed Cell 1 internal levee and associated G-248 structures remains scheduled for the winter 2006 (FY 2007) as per a previously approved revision to the Long-Term Plan. The construction of the levee and the structures is now proposed to be constructed in the wet whereby inflow to the eastern flow-way will be reduced, but not completely suspended. The estimated completion date for the proposed Cell 1 internal levee and structures is July 2007 (FY 2007). The current proposed revision involves the vegetation conversion to SAV in Cells 1B and 3. Based on lessons learned with the STA-1W western flow-way vegetation conversion, the eastern flow-way will not be taken completely off-line for the vegetation conversion work which will occur concurrently with construction beginning February or March 2007 (FY 2007). Selective spraying of herbicide will be employed to create open areas for SAV growth and to encourage vegetated berms which are intended to serve as wind breaks. The estimated completion date for the herbicide application is January 2008 with SAV grow-in occurring over the summer of 2008.

The October 27, 2003 Long-Term Plan assumed improvement in phosphorus removal resulting from improved flow distribution from new internal levees and structures in STA-2 Cell 3, STA-6 Section 1 and STA-6 Section 2. The capital cost estimate for these internal levees and associated structures was $8.23 million in FY 2003 dollars. In order to complete the new levees, the existing cells would have had to be taken off-line for 12 to 30 months. As recommended in the Long-Term Plan, a tracer study was conducted in STA-2 Cell 3 to achieve a better understanding of the hydraulics of the cell. The tracer

study (DB Environmental, Inc., 2004) demonstrated efficient hydraulics in STA-2 Cell 3 without the levee. In addition, the phosphorus removal performance of STA-2 Cell 3, STA-6 Section 1 and STA-6 Section 2 with and without compartmentalization was evaluated. The model runs indicated no improved phosphorus removal performance with the levees compared to without the levees for these three cells. It is therefore currently proposed to delete the STA-2 Cell 3, STA-6 Section 1 and STA-6 Section 2 internal levees that were included in the October 27, 2003 Long-Term Plan.

Revisions to the Options for Accelerating Recovery Project are currently proposed. During development of the October 27, 2003 Long-Term Plan, it was anticipated that research would require expenditures (FY 2003 dollars) of $500,000 per year for a 3-year period encompassing Fiscal Years 2004-2006, inclusive. Subsequent to completion of the Long-Term Plan, it was determined that the overall timeframe associated with conducting the appropriate studies for making management decisions might impact the ability to provide sufficiently supported data by the originally planned date and within the original budget. It is proposed that the Options for Accelerating Recovery project be extended by four years to FY2010 with a revised total budget of $3,767,282. The proposed revisions are intended to improve the District's ability to enhance the recovery of impacted areas by providing recommendations as to methods for restoring ecosystem function in the Everglades.

Revisions to the Process Development and Engineering (PDE) Component are also currently proposed. A brief description of the proposed revisions is as follows:

- Add Operations and Permit Monitoring for the expanded treatment areas
- Extend the STA Analysis and Interpretation project for the expanded treatment areas
- Extend the PSTA Investigations Project to track the USACE PSTA project in STA-1E
- Extend operations and monitoring of the STA-3/4 PSTA Demonstration Project
- Revise the location and schedule for the post-levee dye tracer study consistent with deletion of the internal levee in STA-2 Cell 3
- Increase the emphasis on the Lake Okeechobee Long-Term Trends Project to understand impacts on the STAs
- Extend the project to Determine Water Quality Relationships in Everglades Protection Area
- Use Adaptive Implementation to implement new activities, such as BMPs in District Canals, Strategies for Vegetation Management in STAs, and Real Time Phosphorus Monitoring at STAs

Descriptions of previously approved revisions to the Long-Term Plan can be found on the District's website and in the 2005 and 2006 SFER – Volume I, Chapter 8.

CHALLENGES TO ACHIEVING LONG-TERM WATER QUALITY GOALS

Successful implementation of the Long-Term Plan will require integration of numerous research, planning, regulatory, and construction activities. The District and the FDEP are committed to achieving these long-term water quality goals.

REGULATORY ISSUES

The Long-Term Plan being implemented by the District has the planning goal of achieving water quality standards, including the TP criterion in the EPA. During the initial phase of implementation (pre-2016) of the Long-Term Plan, permits issued by the FDEP are to be based on Best Available Phosphorus Reduction Technology, as defined by the EFA, and include technology-based effluent limits consistent with the Long-Term Plan.

In addition, the FDEP must evaluate water quality standards for parameters other than TP for the EPA and EAA canals. As a part of this evaluation, the FDEP is also specifically directed by the EFA to recognize by rulemaking the existing beneficial uses of the EAA conveyance canals.

The FDEP has been evaluating water quality standards for canals as a part of a state-wide reevaluation of water quality standards with a specific emphasis on classifications, which will include consideration of the existing beneficial uses. The FDEP will be conducting this review in consultation with a technical advisory committee of appropriate stakeholders, with final recommendations from this effort due by March 1, 2007. Other regulatory issues are discussed in Chapter 4 of this volume.

STORMWATER TREATMENT AREA OPTIMIZATION RESEARCH

Chapter 5 of this volume presents a summary of STA optimization research that occurred in FY2006. While critical research is continuing on STA optimization, the Long-Term Plan includes a process of adaptive implementation to incorporate the best available and scientifically defensible information during implementation of the Long-Term Plan.

SOURCE CONTROL MEASURES

Controlling TP loads at the source, both in the EAA and the non-ECP basins, continues to be a high priority in the Long-Term Plan. For this reason, source control development and implementation funding was provided again in FY2006, and will continue to be provided throughout the implementation of the Long-Term Plan. Additional information on the Long-Term Plan source control projects can be found in Chapter 4 of this volume.

SYNCHRONIZATION WITH COMPREHENSIVE EVERGLADES RESTORATION PLAN PROJECTS

The majority of Everglades tributary basins contain proposed CERP projects. As in FY2004 and FY2005, the District continued in FY2006 to coordinate with members of CERP's Project Delivery Teams (PDTs) in an effort to integrate Long-Term Plan projects with CERP projects, where possible, consistent with the 2003 amended EFA.

The potential remains for significant cost savings and water quality improvements by integrating some of the Long-Term Plan components with CERP projects. Many of the CERP projects are still in the early planning and design phases. Therefore, uncertainty continues as to how CERP projects will influence flows and water quality and as to the implementation schedules for the projects. Continued close coordination is needed between members of the PDTs and staff implementing the Long-Term Plan components to ensure that project goals are met on schedule.

STATUS OF WATER QUALITY AND FLOW CONDITIONS IN THE EVERGLADES PROTECTION AREA

The EAA BMPs and the STAs have been removing phosphorus from waters discharging to the EPA for over ten years, and as a result, water quality conditions are improving in the areas of the EPA that are downstream of the STA discharges. Although an attempt is made in Chapter 1B of this SFER volume to qualitatively link the response of the EPA to the STA discharges, it may not be possible to quantitatively show the water quality response of the EPA to the Long-Term Plan projects until a year or more after completion of the STA enhancements and then again, until a year or more after completion of the STA expansions (currently set for 2008 and 2010, respectively).

Similarly, the response of the EPA from a flow perspective may not be measured until a year or two after the Hydropattern Restoration projects are complete (after 2012), however efforts are under way as part of the Long-Term Plan to develop the tools for predicting the response of the system to the proposed projects. The status of the development of the tools needed to predict recovery is reported in Chapter 6 of this volume. For more information on the hydrology of the South Florida environment and on the status of water quality in the EPA, see Chapters 2 and 3A of this volume.

LITERATURE CITED

Burns & McDonnell. 2003. Everglades Protection Area Tributary Basins Long-Term Plan for Achieving Water Quality Goals. October 2003. Report prepared for the South Florida Water Management District, West Palm Beach, FL.

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